AMENDMENTS TO THE CLAIMS:

Kindly amend claim 17, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claims 1-16 (previously cancelled)

Claim 17 (currently amended): A laser cavity formed between an entry mirror and an exit mirror, and comprising:

a substrate made of a doped or undoped active laser material $Y_3A1_5O_{12}$ (YAG) on which a monocrystalline layer of saturable absorbent material made of doped YAG is deposited directly by liquid phase epitaxy, in which both said active laser material ~~has a [100] orientation,~~ and said monocrystalline layer of saturable absorbent material ~~is deposited with~~ have the same [100] orientation;

wherein said doped or undoped active laser material YAG, said monocrystalline layer of saturable absorbent material made of doped YAG deposited directly on said active laser material by liquid phase epitaxy, and the same specific orientation of both said active laser material [100] and [[the]] said monocrystalline layer [100] achieves controlled polarization of the laser cavity.

Claim 18 (previously presented): A laser cavity according to claim 17, in which said monocrystalline layer of doped saturable absorbent material is deposited by liquid phase epitaxy (LPE).

Claim 19 (previously presented): A laser cavity according to claim 17, in which the substrate is a YAG active laser material, doped by one or several doping ion(s) that confer active laser material properties on it.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Claim 20 (previously presented): A laser cavity according to claim 19, in which at least one said doping ion is selected from the group consisting of: Nd ion, Cr ion, Er ion, Yb ion, Ho ion, Tm ion and Ce ion.

Claim 21 (previously presented): A laser cavity according to claim 19, in which the proportion of the doping ion(s) is 0.1 to 10 moles % for each ion.

Claim 22 (previously presented): A laser cavity according to claim 17, in which the monocrystalline layer of a saturable absorbent material is a YAG doped with one or several doping ions selected from the group consisting of Chromium (Cr) ion, Erbium (Er) ion, Thulium (Tm) ion, and Holmium (Ho) ion.

Claim 23 (previously presented): A laser cavity according to claim 22, in which said doping ion is Chromium ion.

Claim 24 (previously presented): A laser cavity according to claim 22, in which the proportion of the doping ion(s) is 1 to 10 moles % for each doping ion.

Claim 25 (previously presented): A laser cavity according to claim 17, in which the layer and/or the substrate are doped with at least a second doping agent or substitute in order to modify their structural and/or optical properties.

Claim 26 (previously presented): A laser cavity according to claim 25, in which said second doping ion is selected from the group consisting of gallium ion and an inactive rare earth ion.

Claim 27 (previously presented): A laser cavity according to claim 17, in which the thickness of the monocrystalline layer of saturable absorbent material is between 1 and 500 μm.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

Claim 28 (previously presented): A laser cavity according to claim 17, in which the said monocrystalline layer of saturable absorbent material is a thin layer with a thickness of between 1 and 150 μm.

Claim 29 (previously presented): A laser cavity according to claim 17, which also comprises an entry mirror and an exit mirror, said entry mirror being directly deposited on the substrate made of a saturable absorbent material.

Claim 30 (previously presented): A laser cavity according to claim 29, in which the exit mirror is directly deposited on the monocrystalline layer made of a saturable absorbent material.

Claim 31 (previously presented): A process for the collective production of triggered microlaser cavities comprising the steps of:

supplying a substrate made of a doped or undoped $Y_3Al_5O_{12}$ (YAG) active laser material with a [100] orientation in the shape of a sheet with parallel faces polished on its two faces;

depositing a monocrystalline layer of doped YAG saturable absorbent material on one of the faces of the said $Y_3Al_5O_{12}$ (YAG) active laser material, by liquid phase epitaxy;

polishing the saturable absorbent monocrystalline layer thus deposited;

depositing entry and exit mirrors on the two polished faces of the cavity; and

cutting out the substrate - monocrystalline layer - mirrors complex thus obtained;

wherein said doped or undoped active laser material YAG, said monocrystalline layer of saturable absorbent material made of doped YAG deposited directly on said active laser material by liquid phase epitaxy, and the specific orientation of

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

both said active laser material [100] and the said monocrystalline layer [100] achieves controlled polarization of the laser cavity.

Claim 32 (previously presented): A triggered laser with controlled polarization comprising a cavity according to claim 17, and pumping means for this cavity.

Claim 33 (previously presented): A laser cavity according to claim 17, in which the entry mirror is deposited directly on the active laser material substrate.

Claim 34 (previously presented): A process according to claim 31, wherein the entry mirror is deposited on the active laser material.

HAYES SOLOWAY P.C.
130 W. CUSHING ST.
TUCSON, AZ 85701
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567